Pillar 3 Annual Disclosure Report as at 31st December 2018

J.P. Morgan Securities Plc

J.P. Morgan Markets Limited

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1. Introduction

Overview

The Basel Committee on Banking Supervision published its set of rules on 16th December 2010, referred to as Basel III.
The Basel framework consists of a three 'Pillar' approach:

- **Pillar 1** establishes minimum capital requirements, defines eligible capital instruments, and prescribes rules for calculating risk weighted assets ('RWA');
- **Pillar 2** requires banks to have an Internal Capital Adequacy Assessment Process ('ICAAP') and requires that banking supervisors evaluate each bank's overall risk profile as well as its risk management and internal control processes; and
- **Pillar 3** encourages market discipline through a prescribed set of disclosure requirements which allow market participants to assess the risk and capital profiles of banks.

The transposition of the Basel III framework into European law is in two parts: the Capital Requirements Directive IV (CRD IV/Directive 2013/36/EU) and the Capital Requirements Regulation ('CRR')[1]. It was published in the Official Journal of the European Union on 27th June 2013. Part Eight of CRR includes additional provisions on regulatory disclosure for credit institutions. Both the Directive and the Regulation are applicable since 1st January 2014.

This disclosure contains the Pillar 3 disclosures for J.P. Morgan Securities plc and J.P. Morgan Markets Limited and provides information on the Companies' capital structure, capital adequacy, risk exposures, and RWA.

This disclosure fulfills the requirements as set out in Part Eight of CRR, and in the supplementary Implementing Technical Standards ('ITS') and guidelines[2] issued by the European Banking Authority ('EBA').

These disclosures have been prepared in full accordance with the EMEA Pillar 3 Process document[3], which itself has been approved at Board level by all disclosing entities.

The Pillar 3 process outlines:

- The roles and responsibilities in the production of public disclosure
- The annual assessment process requirements for entity scope, disclosure frequency, accuracy and completeness of disclosure, process for omissions on the grounds of materiality, proprietary or confidentiality, and
- The overall governance requirements around disclosures and the processes to compile them.

The Pillar 3 disclosure has been approved for publication by the Board of Directors of the entities whose disclosure is contained herein. Attestation, that disclosures have been prepared in accordance with the J.P. Morgan EMEA Pillar 3 approved process, has been provided in line with the EBA Guidelines (EBA/GL/2016/11).

Frequency of Disclosure (Article 433)

The UK entities in scope publish an annual report in accordance with Article 433 CRR.

The need to assess whether an institution should disclose some information more frequently than annually, under Part Eight of the CRR originates in Article 433 and the requirements are further articulated in the Guidelines, which were adopted by the Prudential Regulation Authority ('PRA') from 15th October 2015.

All J.P. Morgan Chase entities regulated under the Capital Requirements Directive IV ('CRD IV')[4] Capital Requirements Directive (CRD IV)/Regulation (EU) Directive 2013/36/EU have applied the Guidelines by:

- Enhancing the Pillar 3 process to include a full assessment of the need to publish data more frequently than annually; and
- Identifying the key data elements to disclose in order to meet the needs of potential users of the disclosure.

The internal assessment process (under Title II of Guidelines) to determine which J.P. Morgan entities should disclose more frequently than annually concluded that J.P. Morgan Securities plc is meeting the qualitative and quantitative thresholds to necessitate more frequent disclosure.

[1] Capital Requirements Regulation (CRR) / Regulation (EU) No. 575/2013
[2] EBA /GL/2014/14 Guidelines on materiality, proprietary and confidentiality and on disclosure frequency under Articles 432(1), 432(2) and 433 of Regulation (EU) No. 575/2013 published 23th December 2017 and EBA/ GL/2016/11 Guidelines on disclosure requirements under part eight of regulation (EU) No. 575/2013 published 4th August 2017
[3] J.P. Morgan EMEA Pillar 3 Process document - first published June 2016, latest update and approval April 2018
[4] Capital Requirements Directive (CRD IV) / Regulation (EU) Directive 2013/36/EU

Means of Disclosure (Article 434)

The disclosure report for UK regulated entities is made available according to Article 434 CRR on the website of JPMorgan Chase & Co. at: http://investor.shareholder.com/jpmorganchase/basel.cfm

The ultimate parent of the entities in scope of the disclosure is JPMorgan Chase & Co. ('JPMorgan Chase'), a financial holding company incorporated under Delaware law in 1968. Firmwide disclosure is made under Basel III requirement and is available using the same link as the UK regulated entities disclosure. The report should be read in conjunction with the Annual Report on Form 10-K and the Quarterly Report on Form 10-Q which have been filed with the U.S. Securities and Exchange Commission and available at the following link: http://investor.shareholder.com/jpmorganchase/sec.cfm

Scope of Application (Article 436)

These disclosures are made for J.P. Morgan entities within the U.K. and include disclosure for the following:

- **J.P. Morgan Securities plc** ('JPMS plc') which is one of the primary subsidiaries of J.P. Morgan Capital Holdings Limited ('JPMCHL')
    - The main activities of JPMS plc within the JPMCHL group are Corporate and Investment Bank activities
    - JPMS plc is authorised by the Prudential Regulation Authority ('PRA') and regulated by the PRA and Financial Conduct Authority ('FCA')
- **J.P. Morgan Markets Limited** ('JPMML') is a primary subsidiary of J.P. Morgan Financial Investments Limited ('JPMFIL')
    - The main activities of JPMML consist of Corporate & Investment Bank activities
    - JPMML is authorised and regulated by the FCA

JPMS plc and JPMML have been identified as significant subsidiaries of JPMCHL and JPMFIL respectively under Article 13 of the CRR, according to the aforementioned JPMC EMEA Pillar 3 Policy and are both included on that basis.

The scope of consolidation for regulatory capital purposes is consistent with the accounting basis for consolidation.

This document refers to JPMorgan Chase or the Firm when referring to frameworks, methodologies, systems and controls that are adopted throughout JPMorgan Chase and its subsidiaries. Entity names or Company are used to refer to documents, financial resources and other tangible concepts relevant only to that entity.

As required under Article 436 CRR, it is confirmed that there are no current or foreseen material practical or legal impediments to the prompt transfer of own funds or repayment between JPMS plc and its parent, nor between JPMML and its parent.

No items have been omitted due to materiality reasons under Titles III and IV of the Guidelines. Any line items that are not applicable have been hidden for presentation purposes.

Board Declaration - Adequacy of Risk Management Arrangements

The Boards of entities in scope of the disclosure are satisfied that Management has taken reasonable care to establish and maintain risk systems and controls as appropriate to the business.

Expected departure of the UK from the EU

In 2016, the UK voted to withdraw from the EU, and in March 2017, the UK invoked Article 50 of the Lisbon Treaty, which commenced withdrawal negotiations with the EU. As a result, and after two extensions of the negotiation timeline, the UK is currently scheduled to depart from the EU on 31st October, 2019. Negotiations regarding the terms of the UK's withdrawal continue between the UK and the EU, although the situation remains highly uncertain.

The Firm established a Firmwide Brexit Implementation programme in 2017. The Firm has been making the necessary modifications to its legal entity structure and operations in the EU, the locations in which it operates and the staffing in those locations to ensure the continuity of service to the clients. For further details please refer to the Annual reports of the companies for the year ended 31st December 2018 available on the Companies House Website.

2. Own Funds (Article 437)

Own Funds Disclosures

Capital resources represent the amount of regulatory capital available to an entity to cover all risks. Defined under the CRR, capital resources are designated into two tiers, Tier 1 and Tier 2. Tier 1 capital consists of Common Equity Tier 1 ('CET1') and Additional Tier 1 ('AT1'). CET1 is the highest quality of capital and for the entities for which this disclosure relates, is made up of share capital, reserves and audited profit; there is no AT1 in either entity. Tier 2 capital consists of subordinated debt and other eligible capital instruments.

The Financial Stability Board ('FSB') Total Loss Absorbing Capacity ('TLAC') standard, issued in November 2015, specified minimum TLAC requirements for G-SIB's, including at the level of their material sub-groups. Within the EU and the UK, the EU Bank Recovery and Resolution Directive ('BRRD') and the UK transposition of the Directive established a requirement for the Bank of England ('BoE') to set a target level for Minimum Requirement for own funds and Eligible Liabilities ('MREL'). Amendments to the EU MREL framework are currently being agreed through the finalisation of the CRD V/ BRRD II package. Both TLAC and MREL are intended to facilitate the resolution of a financial institution without causing financial instability and without recourse to public funds. The BoE published its updated Statement of Policy on its approach to setting MREL in June 2018. This included new requirements on the internal MREL resources to be held by UK material subsidiaries of overseas groups. In line with the FSB TLAC standard, these rules came into effect, on a transitional basis, from 1st January 2019, with full compliance required by 1st January 2022.

The information represented in the tables below constitutes the applicable data elements for Own Funds identified in Title VII of the Guidelines. The final column represents the capital position on a fully-phased in basis after all CRR transitional provisions have expired and phase-out of grandfathered capital instruments under pre-CRR national transposition measures is complete. Other capital impacts including instrument maturity or behavioural changes are not considered for the fully-phased in position.

Key Changes During the Period

- **JPMS plc**: The total capital ratio has increased by 7.48% (15.94% as at 31st December 2017). The increase in the total capital ratio is primarily driven by $12bn increase in T2 capital ($0 as at 31st December 2017) impacting the numerator of the ratio, and by decreases in RWAs impacting the denominator of the ratio. The increase in T2 capital was due to $12bn of subordinated debt issued in December 2018 to meet MREL requirements which took effect from 1st January 2019. The movement in RWAs was driven by decreases in Counterparty Credit Risk ('CCR').

- **JPMML**: No significant changes in the capital structure during 2018.

Table 1: CRDIV Regulatory Capital for JPMS plc[5]

Transitional Own Funds Disclosure Template ($'mm)		Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
Common Equity Tier 1 capital: instruments and reserves				
1	Capital instruments and the related share premium accounts	22,394	26 (1), 27, 28, 29, EBA list 26 (3)	22,394
	of which: Ordinary shares	22,394	EBA list 26 (3)	22,394
2	Retained earnings	15,847	26 (1) (c)	15,847
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	6,663	26 (1)	6,663
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	44,904		44,904
Common Equity Tier 1 (CET1) capital: regulatory adjustments				
7	Additional value adjustments (negative amount)	(1,321)	34, 105	(1,321)
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	(1,321)		(1,321)
29	**Common Equity Tier 1 (CET1) capital**	43,583		43,583
Additional Tier 1 (AT1) capital: Instruments				
44	**Additional Tier 1 (AT1) capital**	—		—
45	**Tier 1 capital (T1 = CET1 + AT1)**	43,583		43,583
Tier 2 (T2) capital: instruments and provisions				
46	Capital instruments and the related share premium accounts	12,000	62, 63	12,000
51	**Tier 2 (T2) capital before regulatory adjustments**	12,000		12,000
57	**Total regulatory adjustments to Tier 2 (T2) capital**	—		—
58	**Tier 2 (T2) capital**	12,000		12,000
59	**Total capital (TC = T1 + T2)**	55,583		55,583
60	**Total risk weighted assets**	237,300		237,300

[5] For the purposes of these disclosures, profits related to 2018 but only recognised post-audit, after its completion in 2019, have been included in capital resources.

	Transitional Own Funds Disclosure Template ($'mm)	Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
Capital ratios and buffers				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount)	18.37%	92 (2) (a), 465	18.37%
62	Tier 1 (as a percentage of total risk exposure amount)	18.37%	92 (2) (b), 465	18.37%
63	Total capital (as a percentage of total risk exposure amount)	23.42%	92 (2) (c)	23.42%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer (G-SII or O-SII buffer) expressed as a percentage of risk exposure amount)	6.57%	CRD 128, 129, 130	7.20%
65	of which: capital conservation buffer requirement	1.87%		2.50%
66	of which: countercyclical buffer requirement	0.20%		0.20%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	12.37%	CRD 128	12.37%
Amounts below the thresholds for deduction (before risk weighting)				
72	Direct and indirect holdings of the capital of financial sector entities where the institution does not have a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	3,236	36 (1) (h), 46, 45, 472 (10), 56 (c), 59, 60, 475 (4), 66 (c), 69, 70, 477 (4)	3,236
73	Direct and indirect holdings by the institution of the CET1 instruments of financial sector entities where the institution has a significant investment in those entities (amount below 10% threshold and net of eligible short positions)	2,257	36 (1) (i), 45, 48, 470, 472 (11)	2,257
75	Deferred tax assets arising from temporary differences (amount below 10% threshold, net of related tax liability where the conditions in Article 38 (3) are met)	92	36 (1) (c), 38, 48, 470, 472 (5)	92

Table 2: CRDIV Regulatory Capital for JPMML

	Transitional Own Funds Disclosure Template ($'mm)	Amount at Disclosure Date	Regulation (EU) No 575/2013 Article Reference	Fully-Phased in Position
Common Equity Tier 1 capital: instruments and reserves				
1	Capital instruments and the related share premium accounts	126	26 (1), 27, 28, 29, EBA list 26 (3)	126
	of which: Ordinary shares	126	EBA list 26 (3)	126
2	Retained earnings	(62)	26 (1) (c)	(62)
3	Accumulated other comprehensive income (and other reserves, to include unrealised gains and losses under the applicable accounting standards)	4,077	26 (1)	4,077
6	**Common Equity Tier 1 (CET1) capital before regulatory adjustments**	4,141		4,141
Common Equity Tier 1 (CET1) capital: regulatory adjustments				
7	Additional value adjustments (negative amount)	(4)	34, 105	(4)
28	**Total regulatory adjustments to Common Equity Tier 1 (CET1)**	(4)		(4)
29	**Common Equity Tier 1 (CET1) capital**	4,137		4,137
Additional Tier 1 (AT1) capital: Instruments				
44	**Additional Tier 1 (AT1) capital**	—		—
45	**Tier 1 capital (T1 = CET1 + AT1)**	4,137		4,137
Tier 2 (T2) capital: instruments and provisions				
58	**Tier 2 (T2) capital**	—		—
59	**Total capital (TC = T1 + T2)**	4,137		4,137
60	**Total risk weighted assets**	310		310
Capital ratios and buffers				
61	Common Equity Tier 1 (as a percentage of total risk exposure amount	1,335.58%	92 (2) (a), 465	1,335.58%
62	Tier 1 (as a percentage of total risk exposure amount)	1,335.58%	92 (2) (b), 465	1,335.58%
63	Total capital (as a percentage of total risk exposure amount)	1,335.58%	92 (2) (c)	1,335.58%
64	Institution specific buffer requirement (CET1 requirement in accordance with article 92 (1) (a) plus capital conservation and countercyclical buffer requirements, plus systemic risk buffer, plus systemically important institution buffer (G-SII or O-SII buffer) expressed as a percentage of risk exposure amount)	6.97%	CRD 128, 129, 130	7.60%
65	of which: capital conservation buffer requirement	1.88%		2.50%
66	of which: countercyclical buffer requirement	0.60%		0.60%
68	Common Equity Tier 1 available to meet buffers (as a percentage of risk exposure amount)	1,327.58%	CRD 128	1,327.58%

Own Funds Reconciliation

The tables below present a reconciliation between audited balance sheet own funds and regulatory own funds as at 31st December 2018 in accordance with the requirements set out in Commission Implementing Regulation (EU) No 1423/2013.

Table 3: Reconciliation of Regulatory Own Funds to Balance Sheet for JPMS plc

Regulatory Own Funds Reconciliation to Balance Sheet	Reference[6]	$'mm
CET1 Capital		
1,244,343 Ordinary Shares of $10,000 each	Accounts Note 28	12,443
50,000 Ordinary Shares of £1.24 each	Accounts Note 28	—
Share Premium Account	Accounts Page 57	9,951
Other Reserves	Accounts Page 57	6,663
Retained Earnings	Accounts Page 57	15,847
CET1 Capital - Balance Sheet Own Funds		44,904
Less Regulatory Adjustments		
(-) Additional Valuation Adjustments	CRR Article 34	(1,321)
CET1 Capital - Regulatory Own Funds After Adjustments		43,583
Subordinated Loan (maturity 17/12/2028)	Accounts Note 27	12,000
T2 Capital - Balance Sheet Own Funds		12,000
T2 Capital - Regulatory Own Funds After Adjustments		12,000
Total Regulatory Own Funds		55,583

Table 4: Reconciliation of Regulatory Own Funds to Balance Sheet for JPMML

Regulatory Own Funds Reconciliation to Balance Sheet	Reference[7]	$'mm
CET1 Capital		
300 Ordinary Shares of £1 each	Accounts Note 21	—
Share Premium Account	Accounts Page 20	126
Other Reserves	Accounts Page 20	4,077
Accumulated Loss	Accounts Page 20	(62)
CET1 Capital - Balance Sheet Own Funds		4,141
Less Regulatory Adjustments		
(-) Additional Valuation Adjustments	CRR Article 34	(4)
CET1 Capital - Regulatory Own Funds After Adjustments		4,137
Total Regulatory Own Funds		4,137

[6] Refer to JPMS plc Annual report for the year ended 31st December 2018, available on the Companies House Website.
[7] Refer to JPMML Annual report for the year ended 31st December 2018, available on the Companies House Website.

Main Features of Capital Instruments

The tables below present the main features of regulatory capital instruments for the entities in scope as at 31st December 2018 and as required by Commission Implementing Regulation (EU) No 1423/2013. The terms and conditions can be found on the Companies House website.

Table 5: Main Features of Regulatory Capital Instruments

Capital Instruments Main Features		JPMS plc				JPMML
		CET1	CET1	CET1	T2	CET1
		$10,000 ordinary shares	£1 ordinary shares	£1.24 ordinary shares	$12,000mm subordinated loan	£1 ordinary shares
1	Issuer	JPMS plc	JPMS plc	JPMS plc	JPMS plc	JPMML
2	Unique identifier	Private Placement	Private Placement	Private Placement	Internal issuance	Private Placement
3	Governing law(s) of the instrument	The Companies Act 2006	The Companies Act 2006	The Companies Act 2006	English Law	The Companies Act 2006
Regulatory treatment						
4	Transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Common Equity Tier 1
5	Post-transitional CRR rules	Common Equity Tier 1	Common Equity Tier 1	Common Equity Tier 1	Tier 2	Common Equity Tier 1
6	Eligible at solo/(sub-)consolidated/ solo&(sub-)consolidated	Solo	Solo	Solo	Solo	Solo
7	Instrument type (types to be specified by each jurisdiction)	$ Ordinary	£ Ordinary	£ Ordinary	$ Subordinated Notes/ Loan	£ Ordinary
8	Amount recognised in regulatory capital (Currency in million, as of most recent reporting date). Includes issued paid up share capital and share premium	$22,394mm includes nominal and premium	0	0	$12,000mm	$126mm includes nominal and premium
9	Nominal amount of instrument	10,000	£1	£1.24	£12,000,000,000	£1
9a	Issue price	average issue price $17,997	£1	£1.24	£12,000,000,000	average issue price $419,503
9b	Redemption price	N/A	N/A	N/A	1	N/A
10	Accounting classification	Shareholders' equity	Shareholders' equity	Shareholders' equity	Liability - amortised cost	Shareholders' equity
11	Original date of issuance (issued paid up share capital)	$647m Oct 22 1991 $290m Mar 1 2000 $500m Jan 2 2007 $278m Jan 12 2007 $270m Dec 1 2008 $230m Dec 4 2008 $300m Jan 30 2009 $2,000m Dec 20 2010 $2,274m May 27 2011 $362m Dec 12 2011 $1,263m Dec 16 2013 $116m Dec 2014 $662m Jul 27 2015 $2051m Sep 11 2017	£0.000002m Oct 27 1999	£0.062m May 28 2012	$12,000m Dec 17 2018	£0.0003m Apr 22 1982

Capital Instruments Main Features		JPMS plc				JPMML
		CET1	CET1	CET1	T2	CET1
		$10,000 ordinary shares	£1 ordinary shares	£1.24 ordinary shares	$12,000mm subordinated loan	£1 ordinary shares
12	Perpetual or dated	Perpetual	Perpetual	Perpetual	Dated	Perpetual
13	Original maturity date	No maturity	No maturity	No maturity	December 17 2028	No maturity
14	Issuer call subject to prior supervisory approval	No	No	No	Yes	No
15	Optional call date, contingent call dates and redemption amount	N/A	N/A	N/A	N/A	N/A
16	Subsequent call dates, if applicable	N/A	N/A	N/A	N/A	N/A
Coupons / dividends						
17	Fixed or floating dividend/coupon	N/A	N/A	N/A	Floating	N/A
18	Coupon rate and any related index	N/A	N/A	N/A	1M USD Libor + 1.55%	N/A
19	Existence of a dividend stopper	No	No	No	No	No
20a	Fully discretionary, partially discretionary or mandatory (in terms of timing)	Full discretionary	Full discretionary	Full discretionary	Mandatory	Full discretionary
20b	Fully discretionary, partially discretionary or mandatory (in terms of amount)	Full discretionary	Full discretionary	Full discretionary	Mandatory	Full discretionary
21	Existence of step up or other incentive to redeem	No	No	No	No	No
22	Noncumulative or cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative	Non-cumulative
23	Convertible or non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible	Non-convertible
24	If convertible, conversion trigger(s)	N/A	N/A	N/A	N/A	N/A
25	If convertible, fully or partially	N/A	N/A	N/A	N/A	N/A
26	If convertible, conversion rate	N/A	N/A	N/A	N/A	N/A
27	If convertible, mandatory or optional conversion	N/A	N/A	N/A	N/A	N/A
28	If convertible, specify instrument type convertible into	N/A	N/A	N/A	N/A	N/A
29	If convertible, specify issuer of instrument it converts into	N/A	N/A	N/A	N/A	N/A
30	Write-down features	N/A	N/A	N/A	N/A	N/A
31	If write-down, write-down trigger(s)	N/A	N/A	N/A	N/A	N/A
32	If write-down, full or partial	N/A	N/A	N/A	N/A	N/A
33	If write-down, permanent or temporary	N/A	N/A	N/A	N/A	N/A
34	If temporary write-down, description of write-up mechanism	N/A	N/A	N/A	N/A	N/A
35	Position in subordination hierarchy in liquidation (specify instrument type immediately senior to instrument)	Ranks pari passu	Ranks pari passu	Ranks pari passu	Unsecured and Subordinated Creditors	One class of share & same rights attached to all shares
36	Non-compliant transitioned features	No	No	No	No	No
37	If yes, specify non-compliant features	N/A	N/A	N/A	N/A	N/A

3. Capital Requirements (Article 438)

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment.

Internal Capital Adequacy Assessment Process

The entities in scope complete an ICAAP on a periodic basis, which provides management with a view of the impact of severe and unexpected events on earnings, risk-weighted assets and capital. The Company's ICAAP integrates stress testing protocols with capital planning. The process assesses the potential impact of alternative economic and business scenarios on the Company's earnings, capital resources, risk-weighted assets and balance sheet. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the entities in scope. However, when defining a broad range of scenarios, realized events can always be worse. ICAAP results are reviewed by management and the relevant Board of Directors.

Minimum Capital Requirements

The tables below show a breakdown of the risk weighted assets and associated Minimum Capital Requirements for JPMS plc and JPMML. The standardised approach has been used for the calculation of credit risk. The Mark-to-Market Method ('MtM') and Internal Model Method ('IMM') have been employed to calculate OTC derivative exposure in CCR. Market Risk Capital Requirements have been measured by using a combination of the standardised approach and internal models including Value-at-Risk (VaR) approved by the PRA. The Basic Indicator Approach ('BIA') has been used for the calculation of Operational Risk Capital Requirements.

The minimum capital requirements below represent the Pillar 1 requirements as per the CRR. It does not include additional minimum requirements set out by the PRA or FCA as part of the Company's Individual Capital Guidance ('ICG'). In accordance with PRA Supervisory Statement SS31/15, the Company is not required to disclose its ICG.

Key Changes during the Period

- **JPMS plc**:
  - Credit risk (excluding CCR) decreased primarily due to the reclassification from credit risk to CCR for excess pledged collateral on trading book derivatives and SFTs.
  - Exposures to SFTs increased due to Fixed Income Financing business.[8]
  - IMM was introduced to calculate derivative exposures in Q1 2018 following the PRA permission which covers only non-cleared OTC derivatives. The IMM implementation has resulted in the RWAs reduction in CCR and CVA.
  - The increase in market risk capital requirements under IMA is driven by the expansion of IMA scope to include additional business lines.
  - Amounts below the thresholds for deduction decreased due to a reduction in significant investments.
- **JPMML**:
  - No significant changes in RWAs during 2018.

Table 6: EU OV1 - Overview of RWAs for JPMS plc[9]

		($'mm)	RWA		Minimum capital requirements
			Q4 2018	Q4 2017	Q4 2018
	1	**Credit risk (excluding CCR)**	18,651	25,165	1,492
Article 438(c)(d)	2	Of which the standardised approach	18,651	25,165	1,492
Article 107 and Article 438(c)(d)	6	**CCR**	111,164	120,376	8,893
Article 438(c)(d)	7	Of which mark to market	26,018	59,342	2,081
	10	Of which internal model method (IMM)	19,732	—	1,579
Article 438(c)(d)	11	Of which risk exposure amount for contributions to the default fund of a CCP	86	84	7
Article 438(c)(d)	12	Of which CVA	8,771	29,965	702
Article 438(e)	13	**Settlement risk**	262	581	21
Article 438 (e)	19	**Market risk**	88,390	82,628	7,071
	20	Of which the standardised approach	75,146	75,817	6,012
	21	Of which IMA	13,244	6,811	1,060
Article 438(f)	23	**Operational risk**	13,632	12,260	1,091

[8] The exposure value to SFTs is included under CCR in table EU OV1, it is not shown in the CCR breakdown, as in line with the prescribed template.
[9] as per footnote 8

($'mm)			RWA Q4 2018	RWA Q4 2017	Minimum capital requirements Q4 2018
	24	Of which basic indicator approach	13,632	12,260	1,091
Article 437(2), Article 48 and Article 60	27	**Amounts below the thresholds for deduction (subject to 250% risk weight)**	5,201	8,707	416
	29	**Total**	237,300	250,180	18,984

Table 7: EU OV1 - Overview of RWAs for JPMML[10]

($'mm)			RWA Q4 2018	RWA Q4 2017	Minimum capital requirements Q4 2018
	1	**Credit risk (excluding CCR)**	170	169	14
Article 438(c)(d)	2	Of which the standardised approach	170	169	14
Article 107 and Article 438(c)(d)	6	**CCR**	38	20	3
Article 438(c)(d)	7	Of which mark to market	2	14	—
Article 438(c)(d)	12	Of which CVA	—	1	—
Article 438(e)	13	**Settlement risk**	—	—	—
Article 438(f)	23	**Operational risk**	102	51	8
	24	Of which basic indicator approach	102	51	8
	29	**Total**	310	240	25

The table below shows a breakdown of the Minimum Capital Requirements for Credit Risk (including Counterparty Credit Risk). Credit Risk (including Counterparty Credit Risk) is the risk of loss arising from a borrower or counterparty failing to meet its financial obligations.

Table 8: EU OV1 additional - Overview of RWAs by exposure class

Exposure classes ($'mm)		JPMS plc RWA	JPMS plc Capital Requirement	JPMML RWA	JPMML Capital Requirement
1	Central governments or central banks	5,733	459	—	—
2	Regional governments or local authorities	35	3	—	—
3	Public sector entities	357	29	—	—
4	Multilateral Development Banks	77	6	—	—
5	International Organisations	—	—	—	—
6	Institutions	24,583	1,967	85	7
7	Corporates	59,807	4,785	65	5
10	Exposures in default	160	13	—	—
11	Items associated with particularly high risk	29,319	2,345	—	—
14	Collective investments undertakings (CIU)	—	—	—	—
15	Equity exposures	5,181	414	14	1
16	Other items	906	72	43	4
17	**Total**	126,158	10,093	207	17

[10] as per footnote 8

4. Countercyclical Capital Buffers (Article 440)

Under Basel III, each firm is required to hold an additional capital buffer against macroeconomic risks associated with an increase in aggregate credit. Each firm is required to calculate its institution-specific countercyclical buffer rate as a weighted average of the buffer rates that have been set for each jurisdiction to which the firm has relevant credit exposures. The countercyclical buffer is then the institution-specific countercyclical buffer rate multiplied by total RWA.

The tables below show a breakdown of the geographic distribution of relevant credit exposures along with the calculation of the institution-specific countercyclical capital buffer as per Commission Delegated Regulation (EU) 2015/1555. There are no banking securitisation exposures and therefore no relevant credit exposures arising from banking book securitisation exposures are shown below.

Table 9: Geographic Distribution of Credit Exposures Relevant to the Calculation of the Countercyclical Capital Buffer for JPMS plc

Breakdown by country ($'mm)	General credit exposures	Trading book exposure		Own funds requirements			Own funds requirement weights	Countercyclical capital buffer rate
	Exposure value for SA	Sum of long and short position of trading book	Value of trading book exposure for internal models	Of which: General credit exposures	Of which: Trading book exposures	Total		
United Kingdom	11,819	3,146	—	925	330	1,255	13.15%	1.000%
Sweden	1,570	121	—	123	11	134	1.40%	2.000%
Hong Kong	1,408	55	—	113	17	130	1.36%	1.875%
Norway	791	149	—	45	5	50	0.53%	2.000%
Iceland	16	38	—	1	3	4	0.05%	1.250%
Czech Republic	46	9	—	3	1	4	0.04%	1.000%
Slovakia	4	—	—	—	—	—	0.00%	1.250%
Lithuania	—	—	—	—	—	—	0.00%	0.500%
Other Countries	68,089	11,089	1	6,013	1,953	7,966	83.47%	0.000%
Total	**83,743**	**14,607**	**1**	**7,223**	**2,320**	**9,543**	**100.00%**	

Table 10: Geographic Distribution of Credit Exposures Relevant to the Calculation of the Countercyclical Capital Buffer for JPMML

Breakdown by country ($'mm)	General credit exposures	Trading book exposure		Own funds requirements			Own funds requirement weights	Countercyclical capital buffer rate
	Exposure value for SA	Sum of long and short position of trading book	Value of trading book exposure for internal models	Of which: General credit exposures	Of which: Trading book exposures	Total		
United Kingdom	65	—	—	5	—	5	59.87%	1.000%
Other Countries	44	—	—	4	—	4	40.13%	0.000%
Total	**109**	**—**	**—**	**9**	**—**	**9**	**100.00%**	

Table 11: Amount of Institution-Specific Countercyclical Capital Buffer

($'mm)	JPMS plc	JPMML
Total Risk Exposure Amount	237,300	310
Institution Specific Countercyclical Buffer Rate	0.197%	0.599%
Institution Specific Countercyclical Buffer Requirement	467	2

5. Credit Risk Adjustments (Article 442)

Adoption of IFRS 9

Effective 1st January 2018, the Company adopted IFRS 9 'Financial Instruments', which superseded IAS 39 'Financial Instruments Recognition and Measurement'. The adoption of IFRS 9 resulted in changes to the classification and measurement of financial assets including the impairment of financial assets and the presentation of gains and losses related to certain financial liabilities designated at fair value through profit or loss.

Impairment of financial assets and lending-related commitments

The Company recognises expected credit losses ('ECL') for financial assets that are measured at amortised cost or fair value through other comprehensive income ('FVOCI'), and specified off-balance sheet lending-related commitments such as loan commitments and financial guarantee contracts.

Provisions for ECL are recognised on initial recognition of the financial instrument based on expectations of credit losses at that time. The credit loss allowance includes ECLs for financial instruments that may default in the next 12-month period for financial instruments that have not observed a significant increase in credit risk since initial recognition ('stage 1') or over a lifetime period for financial instruments that have observed a significant increase in credit risk since initial recognition ('stage 2'). The allowance also includes lifetime ECLs for financial instruments where there is objective evidence of credit-impairment at the reporting date ('stage 3'). In determining the appropriate stage for a financial instrument, the Company applies the definition of default consistent with the Basel definition of default to maintain uniformity of the definition across the Firm.

The determination of the stage for credit losses under the ECL model is dependent on the measurement of a significant increase in credit risk ('SICR'). In determining SICR, the Company has conducted quantitative tests, which considers, but is not limited to, existing risk management indicators, credit rating changes and reasonable and supportable forward-looking information. Forward-looking information reflects a range of scenarios that incorporate macro-economic factors that are composed and monitored by the Firmwide specialised economic forecasting team.

The key input components for the quantification of expected credit loss through the ECL model includes the probability of default ('PD'), loss given default ('LGD') and exposure at default ('EAD'). The Company seeks to efficiently and effectively leverage as much as possible existing regulatory and capital frameworks where overlap is present for IFRS 9. Differences observed between content in existing frameworks and requirements under IFRS 9 have been identified and are adjusted accordingly. The inputs to the ECL model capture historical datasets and a reasonable and supportable forecasting horizon to estimate expected credit losses.

Impairment of non-financial assets

Non-financial assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are largely independent cash inflows (cash-generating units). Prior impairments of non-financial assets (other than goodwill) are reviewed for possible reversal at each reporting date.

Past due

A financial asset is past due when a counterparty has failed to make a payment when contractually due following appropriate market convention.

Credit Risk Adjustments for Derivatives

In determining the fair value of a derivative portfolio, valuation adjustments may be appropriate to reflect the credit quality of the counterparty, the credit quality of the Company, and the funding risk inherent in certain derivatives. The credit and funding risks of the derivative portfolio are generally mitigated by arrangements provided to the Company by JPMorgan Chase Bank, N.A. and therefore the Company takes account of these arrangements in estimating the fair value of its derivative portfolio.

The following analysis for credit exposures is only provided for material exposure classes or industries exceeding 5% of the total net value. All other exposure classes or industries are included under 'Other residual exposure'. Exposure class 'Exposure in default' is only shown as its original exposure class. All tables in this section do not include counterparty credit risk.

Net and Average Exposures

Net values of on-balance sheet and off-balance exposures are depicted in the tables below. The net value is gross carrying value of exposure less impairments or provisions. The Company has calculated average exposure based on the average of the four quarter end points during the year.

Table 12: EU CRB-B - Total and average net amount of exposures for JPMS plc

	Exposure class ($'mm)	JPMS plc	
		Net exposure at the end of the period	Average net exposure over the period
1	Central governments or central banks	30,351	27,683
2	Institutions	9,167	19,107
3	Corporates	24,067	25,804
4	Other residual exposure	3,976	4,728
5	**Total standardised approach**	67,561	77,322

Table 13: EU CRB-B - Total and average net amount of exposures for JPMML

	Exposure class ($'mm)	JPMML	
		Net exposure at the end of the period	Average net exposure over the period
1	Institutions	111	104
2	Corporates	63	41
3	Equity exposures	14	13
4	Other residual exposure	44	37
5	**Total standardised approach**	232	195

Exposure Class Analysis by Geographical Areas

The tables below provide a breakdown of net credit risk exposures (i.e. net values of on-balance sheet and off-balance sheet exposures before credit risk mitigation) by country. Other geographical areas includes multilateral development banks and international organizations which operate across multiple regions. The analysis is provided for countries exceeding 2.5% of the total net value.

Table 14: EU CRB-C - Geographical breakdown of exposures for JPMS plc

	Exposure class ($'mm)	Net value											
		EMEA	Federal Republic of Germany	Luxembourg	United Kingdom	Republic of South Africa	Other Countries in EMEA (Residual Exposure)	AMERICA	United States of America	Other Countries in AMERICA (Residual Exposure)	APAC	Other Geographical Areas	Total
1	Central governments or central banks	30,307	29,755	—	219	55	278	42	30	12	2	—	30,351
2	Institutions	2,570	129	82	57	2,142	160	5,798	5,784	14	799	—	9,167
3	Corporates	15,508	317	3,833	805	1	10,552	8,230	7,136	1,094	329	—	24,067
4	Other residual exposure	2,552	—	34	2,294	—	224	1,390	1,302	88	—	34	3,976
5	**Total standardised approach**	**50,937**	**30,201**	**3,949**	**3,375**	**2,198**	**11,214**	**15,460**	**14,252**	**1,208**	**1,130**	**34**	**67,561**

Table 15: EU CRB-C - Geographical breakdown of exposures for JPMML

	Exposure class ($'mm)	Net value					
		EMEA	United Kingdom	Other Countries in EMEA (Residual Exposure)	AMERICA	United States of America	Total
1	Institutions	—	—	—	111	111	111
2	Corporates	63	63	—	—	—	63
3	Equity exposures	14	14	—	—	—	14
4	Other residual exposure	—	—	—	44	44	44
5	**Total standardised approach**	**77**	**77**	**—**	**155**	**155**	**232**

Concentration Analysis of Credit Risk Exposures

As it is depicted in tables below the majority of credit risk exposures is concentrated in the finance industry.

Table 16: EU CRB-D - Concentration of exposures by industry or counterparty types for JPMS plc

	Exposure class ($'mm)	Finance Industry	Manufacturing	Other Residual Exposure	Total
1	Central governments or central banks	29,854	—	497	30,351
2	Institutions	9,168	—	—	9,167
3	Corporates	6,679	6,715	10,672	24,067
4	Other residual exposure	1,977	—	1,999	3,976
5	**Total standardised approach**	47,678	6,715	13,168	67,561

Table 17: EU CRB-D - Concentration of exposures by industry or counterparty types for JPMML

	Exposure class ($'mm)	Finance Industry	Total
1	Institutions	111	111
2	Corporates	63	63
3	Equity Exposures	14	14
4	Other residual exposure	44	44
5	**Total standardised approach**	232	232

Residual Maturity Analysis of Credit Risk Exposures

The tables below show net values of on-balance sheet exposures without taking into account the effects of credit risk mitigation broken down by exposure class and residual maturity. Residual maturity is the remaining number of years before an obligation becomes due according to the existing terms of agreement.

Table 18: EU CRB-E - Maturity of exposures for JPMS plc

	Exposure class ($'mm)	Net exposure value					
		On demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Central governments or central banks	109	29,729	—	—	513	30,351
2	Institutions	—	8,165	—	—	401	8,566
3	Corporates	—	1,977	2,176	173	544	4,870
4	Other Residual Exposure	—	148	274	—	3,334	3,756
5	**Total standardised approach**	109	40,019	2,450	173	4,792	47,543

Table 19: EU CRB-E - Maturity of exposures for JPMML

	Exposure class ($'mm)	Net exposure value					
		On Demand	<= 1 year	> 1 year <= 5 years	> 5 years	No stated maturity	Total
1	Institutions	—	19	—	—	92	111
2	Corporates	—	63	—	—	—	63
3	Equity exposures	—	—	—	—	14	14
4	Other residual exposure	—	—	—	—	44	44
5	**Total standardised approach**	—	82	—	—	150	232

Analysis of Credit Exposures

The tables below show defaulted and non-defaulted exposures before credit risk mitigation broken down by exposure class and associated credit risk adjustments. Credit risk adjustments arising from loan loss provisions which are individually immaterial are not used to reduce the exposure value. This is consistent with the CoRep submission.

Table 20: EU CR1-A - Credit quality of exposures by exposure class and instrument for JPMS plc

	Exposure class ($'mm)	a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	Central governments or central banks	—	30,351	—	—	—	—	30,351
2	Institutions	—	9,167	—	—	—	—	9,167
3	Corporates	161	23,907	1	—	—	1	24,067
4	Other residual exposure	—	3,976	—	—	—	—	3,976
5	Total standardised approach	161	67,401	1	—	—	1	67,561
6	**Total**	**161**	**67,401**	**1**	**—**	**—**	**1**	**67,561**
7	Of which: Loans	161	8,232	1	—	—	1	8,392
8	Of which: Debt securities	—	22	—	—	—	—	22
9	Of which: Off-balance-sheet exposures	—	20,018	—	—	—	—	20,018

Table 21: EU CR1-A - Credit quality of exposures by exposure class and instrument for JPMML

	Exposure class ($'mm)	a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	Institutions	—	111	—	—	—	—	111
2	Corporates	—	63	—	—	—	—	63
3	Equity exposures	—	14	—	—	—	—	14
4	Other residual exposure	—	44	—	—	—	—	44
5	Total standardised approach	—	232	—	—	—	—	232
6	**Total**	**—**	**232**	**—**	**—**	**—**	**—**	**232**
7	Of which: Loans	—	63	—	—	—	—	63

Industry Analysis of Credit Risk Exposures

The tables below present an analysis of credit quality of on-balance sheet and off-balance sheet exposures before credit risk mitigation by industry sector and associated credit risk adjustments.

Table 22: EU CR1-B - Credit quality of exposures by industry or counterparty types for JPMS plc

		a	b	c	d	e	f	g
Industry ($'mm)		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	Finance Industry	161	47,518	1	—	—	1	47,678
2	Manufacturing	—	6,715	—	—		—	6,715
3	Other residual exposure	—	13,168	—	—	—	—	13,168
4	**Total**	**161**	**67,401**	**1**	**—**	**—**	**1**	**67,561**

Table 23: EU CR1-B - Credit quality of exposures by industry or counterparty types for JPMML

		a	b	c	d	e	f	g
Industry ($'mm)		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	Finance Industry	—	232	—	—	—	—	232
2	**Total**	**—**	**232**	**—**	**—**	**—**	**—**	**232**

Geographical Location of Exposures

The tables below show credit exposures before credit risk mitigation broken down by geographic location. Other geographical areas includes multilateral development banks and international organisations which operate across multiple regions. The analysis is provided for countries exceeding 2.5% of the total net value.

Table 24: EU CR1-C - Credit quality of exposures by geography for JPMS plc

	Geographical location ($'mm)	a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	**EMEA**	**—**	**50,937**	**—**	**—**	**—**	**—**	**50,937**
2	Federal Republic of Germany	—	30,201	—	—	—	—	30,201
3	Luxembourg	—	3,949	—	—	—	—	3,949
4	United Kingdom	—	3,375	—	—	—	—	3,375
5	Republic of South Africa	—	2,198	—	—	—	—	2,198
6	Other Countries in EMEA (Residual Exposure)	—	11,214	—	—	—	—	11,214
7	**AMERICA**	**161**	**15,300**	**1**	**—**	**—**	**1**	**15,460**
8	United States of America	—	14,252	—	—	—	—	14,252
9	Other Countries in AMERICA (Residual Exposure)	161	1,048	1	—	—	1	1,208
10	**APAC**	**—**	**1,130**	**—**	**—**	**—**	**—**	**1,130**
11	**Other Geographical Areas**	**—**	**34**	**—**	**—**	**—**	**—**	**34**
12	**Total**	**161**	**67,401**	**1**	**—**	**—**	**1**	**67,561**

Table 25: EU CR1-C - Credit quality of exposures by geography for JPMML

	Geographical location ($'mm)	a	b	c	d	e	f	g
		Gross carrying values of		Specific credit risk adjustment	General credit risk adjustment	Accumulated write-offs	Credit risk adjustment charges of the period	Net Values (a+b-c-d)
		Defaulted exposures	Non-defaulted exposures					
1	**EMEA**	**—**	**77**	**—**	**—**	**—**	**—**	**77**
2	United Kingdom	—	77	—	—	—	—	77
3	Other Countries in EMEA (Residual Exposure)	—	—	—	—	—	—	—
4	**AMERICA**	**—**	**155**	**—**	**—**	**—**	**—**	**155**
5	United States of America	—	155	—	—	—	—	155
6	**Total**	**—**	**232**	**—**	**—**	**—**	**—**	**232**

Non-performing and Forborne Exposures

The following table provides an overview of non-performing and forborne exposures as per the Commision Implementing Regulation (EU) No 680/2017 in JPMS plc. There was no non-performing and forborne exposure in JPMML as at 31st December 2018.

Table 26: EU CR1-E - Non-performing and forborne exposures for JPMS plc

($'mm)		Gross carrying amount of performing and non-performing exposures							Accumulated impairment and provisions and negative fair value adjustments due to credit risk				Collaterals and financial guarantees received	
			Of which performing but past due > 30 days	Of which performing forborne	Of which non-performing				On performing exposures		On non-performing exposures		On non-performing exposures	Of which forborne exposures
						Of which defaulted	Of which impaired	Of which forborne		Of which forborne		Of which forborne		
010	Debt securities	22	—	—	—	—	—	—	—	—	—	—	—	—
020	Loans and advances	8,392	—	—	161	161	1	—	—	—	1	—	—	—
030	Off-balance-sheet exposures	20,018	—	—	—	—	—	—	—	—	—	—	—	—

Credit Risk Adjustments

No credit risk adjustment was made in JPMML in the reporting period. The specific credit risk adjustments relate to loans to corporate customers.

Table 27: EU CR2-A - Changes in the stock of general and specific credit risk adjustments

		JPMS plc
		Accumulated specific credit risk adjustment ($'mm)
1	**Opening balance (1st January 2018)**	137
2	Increases due to amounts set aside for estimated loan losses during the period	1
3	Decreases due to amounts reversed for estimated loan losses during the period	(137)
9	**Closing balance (31st December 2018)**	1
10	Recoveries on credit risk adjustments recorded directly to the statement of profit or loss[11]	(116)
11	Specific credit risk adjustments directly recorded to the statement of profit or loss	1

Defaulted and Impaired Exposures

The table below presents changes in defaulted or impaired loans and debt securities during 2018 in JPMS plc. The defaulted exposures represents loans made to corporate customers. No defaulted exposure has been reported in JPMML.

Table 28: EU CR2-B - Changes in the stock of defaulted and impaired loans and debt securities

		JPMS plc
		Gross carrying value defaulted exposures ($'mm)
1	**Opening balance (1st January 2018)**	339
2	Loans and debt securities that have defaulted or impaired since the last reporting period	161
5	Other changes[12]	(339)
6	**Closing balance (31st December 2018)**	161

Past Due Exposures

As at 31st December 2018 there were no material past due exposures reported in the entities in scope.

[11] The negative balance represents positive entry in the P&L.
[12] Includes loans sold in the reporting period.

6. Remuneration (Article 450)

Background

This section sets out the remuneration disclosures required under Article 450 of the Capital Requirements Regulation (the 'CRR') [13] in relation to the UK Entities in scope, and in respect of the remuneration period ('Performance Year') ending 31st December 2018.

The UK Entities in scope are part of the J.P. Morgan Chase & Co group of companies. In this section, the terms 'J.P. Morgan' or 'Firm' refers to the J.P. Morgan Chase & Co. group of companies and each of the entities in that group globally, unless otherwise specified. This section sets out general principles.

This section sets out general principles. Details of specific remuneration programmes are set forth in the relevant plan terms and conditions as in force from time to time.

Qualitative Disclosures

As part of the Firm, the UK Entities in scope apply J.P. Morgan's global compensation philosophy and pay practices. The qualitative remuneration disclosures required under Paragraphs 1(a) - (f) of Article 450 CRR for all employees of the Firm's subsidiaries and branches located in EMEA, including staff of the UK Entities in scope, are available in the most recent EMEA Remuneration Policy Disclosure at:

http://investor.shareholder.com/jpmorganchase/basel.cfm.

Additional qualitative disclosures specific to the UK Entities

The UK Entities in scope are part of the Firm's UK-regulated Corporate and Investment Bank line of business (the '**UK CIB Group**'). The UK CIB Group complied with the applicable remuneration requirements of the Capital Requirements Directive ('**CRD IV**')[14], as implemented in the Prudential Regulation Authority Rulebook and Financial Conduct Authority Handbook (the '**Remuneration Rules**'). The following additional disclosures should therefore be read in conjunction with the EMEA Remuneration Policy Disclosure:

- The Firm has established a UK Remuneration Committee ('**UK RemCo**') formed of non-executive directors, including from the Boards of relevant entities in the UK CIB Group.

- The UK RemCo reviews the remuneration policy applicable to the UK CIB Group (the '**Remuneration Policy**') on an annual basis, recommends it to the relevant Boards for adoption, and oversees its implementation. The UK RemCo last reviewed the Remuneration Policy that applied for the 2018 Performance Year in June 2018 with no material changes and was satisfied with its implementation.

- The UK RemCo held three meetings in respect of the 2018 Performance Year.

- The UK CIB Group undertakes an annual review of its staff against the qualitative and quantitative criteria set out in the European Banking Authority's relevant Regulatory Technical Standard[15] to identify those roles which could potentially have a material impact on the risk profile of the UK Entities ('**CRD IV Identified Staff**'). A description of the types of employees considered as material risk takers is set out in the EMEA Remuneration Policy Disclosure. This CRD IV Identified Staff group is reviewed on an ongoing basis and Identified Staff are notified of their status and the impact on their remuneration structure.

- The UK CIB Group's Risk and Compliance functions are involved in the review of the Remuneration Policy, including reviewing the approach to the designation of CRD IV Identified Staff. The Internal Audit function performs a central and independent review of the implementation of the Remuneration Policy on an annual basis, and relevant findings are reported to the UK RemCo.

- All relevant entities in the UK CIB Group have obtained the relevant shareholder approval in accordance with Article 94(1)g of CRD IV (as implemented by the Remuneration Rules) to pay their CRD IV Identified Staff a maximum ratio of fixed to variable compensation of 1:2. This approval was last received on 29th September 2014, and 100% of shareholders were represented and in favour.

- The compensation structure that applied to relevant CRD IV Identified Staff was as follows:

    - At least 40% of IC is deferred, rising to a minimum of 60% where (i) IC is GBP 500,000 or more; or (ii) the individual is a Board member of one of the Group Entities.

    - The deferral period is at least three years, with vesting generally in three equal tranches on or around the anniversaries of the grant date.

    - For the subset of Identified Staff designated as 'Risk Managers', the deferral period is at least five years, with vesting in five equal tranches on the anniversaries of the grant date. For Identified Staff who hold PRA-designated

[13] Regulation (EU) No. 575 / 2013
[14] Directive 2013/36/EU
[15] Commission Delegated Regulation (EU) No 604/2014

functions under the Senior Manager Regime, the regulatory required deferral is deferred for at least seven years, with vesting in five equal annual tranches from the third anniversary of the grant date.

- At least 50% of IC (both deferred and non-deferred) is awarded as Retained Stock or Restricted Stock Units ('RSUs').
- Retained Stock and relevant RSUs are subject to a twelve month, post-vesting retention period during which the underlying J.P. Morgan shares acquired may not be sold, pledged, assigned or transferred to a private brokerage account, with the exception of RSUs awarded to Risk Managers (excluding Senior Managers) for which the retention period is six months.
- For awards in respect of the 2017 performance year onwards, individuals are not entitled to receive or accrue dividend-equivalent payments on relevant RSUs until vesting.
- All IC is subject to malus and clawback provisions which reflects the requirements of the Remuneration Rules, in addition to the firmwide recovery provisions and the Firm's Bonus Recoupment Policy.

Quantitative Disclosures

The following aggregate quantitative disclosures relate to the UK CIB Group's employees, and therefore include relevant employees of both the UK Entities in scope and other relevant UK CIB entities.

In preparation of these disclosures, the Firm has taken into account its obligations to individuals under the applicable EU and local data protection law. In light of these considerations, the Firm has concluded that it is appropriate to aggregate the compensation information in some areas.

All staff

Table 29: All staff

In USD thousands	Fixed Compensation	Variable Compensation	Total Compensation
All staff	2,221,656	1,106,580	3,328,235

CRD IV Identified Staff

Table 30: Breakdown by Business Area

In USD thousands	Total Compensation 2018	Number of Identified Staff
Management Body[16]	80,330	19
Senior Management[17]	93,459	22
All other CRD IV Identified Staff:		
Corporate & Investment Bank	867,041	598
Corporate functions	54,048	50
Independent Control Functions	27,355	34
Total	1,122,233	723

Table 31: Breakdown of Total Compensation

In USD thousands	Fixed Compensation 2018 (Cash)	Variable Compensation in respect of 2018			
		Upfront Cash	Upfront Equity	Deferred Cash	Deferred Equity
Management Body	34,735	2,149	2,149	295	41,002
Senior Management	48,579	4,125	2,821	458	37,476
All other CRD IV Identified Staff:					
Corporate & Investment Bank	455,938	81,087	72,934	18,072	239,010
Corporate functions	26,409	7,250	5,506	1,676	13,208
Independent Control Functions	14,043	3,697	3,395	695	5,525
Total	**579,703**	**98,308**	**86,804**	**21,197**	**336,221**

[16] Includes both Executives and Non-Executives.
[17] Includes the Firm's Senior Managers under the UK's Senior Managers Regime, excluding those on the Management Body.

Table 32: Analysis of Deferred Compensation

In USD thousands	Outstanding as at 1 January 2018[18]	Awarded during 2018	Paid out during 2018	Adjusted ex-post		Forfeited	Outstanding as at 31 December 2018	
				Explicit	Implicit[19]		Unvested	Vested
Share-based								
Management Body	168,183	35,424	(58,614)	—	(10,536)	—	111,503	22,954
Senior Management	205,708	46,366	(95,826)	—	(9,805)	—	129,000	17,444
All other CRD IV Identified Staff:								
Corporate & Investment Bank	822,751	235,338	(380,220)	—	(40,783)	(17,731)	601,636	17,719
Corporate functions	45,983	11,440	(19,752)	—	(2,576)	(2,091)	28,667	4,338
Independent Control Functions	23,279	5,936	(11,186)	—	(1,077)	(296)	16,486	170
Total	1,265,904	334,504	(565,597)	—	(64,776)	(20,118)	887,291	62,626
Cash-based								
Management Body	1,296	242	(663)	—	12	—	887	—
Senior Management	1,271	498	(577)	—	15	—	1,207	—
All other CRD IV Identified Staff:								
Corporate & Investment Bank	33,334	15,161	(11,934)	—	441	(322)	36,679	—
Corporate functions	2,944	1,388	(908)	—	25	(597)	2,852	—
Independent Control Functions	1,446	825	(604)	—	19	(7)	1,680	—
Total	40,290	18,115	(14,685)	—	512	(926)	43,305	—

Table 33: Guarantees, Sign-ons and Severance Payments

In USD thousands	Guarantees and Sign-on		Severance		
	Number of Identified Staff	Made during the year	Number of Identified Staff	Made during the year	Highest award to a single person
Management Body	—	—	—	—	—
Senior Management	—	—	1	366	366
All other CRD IV Identified Staff:	6	2,986	20	5,264	366

Table 34: Total Compensation Banding for CRD IV Identified Staff Earning at least EUR 1 Million

2018 Total Compensation Bands	Number of Identified Staff
€1,000,001 to €1,500,000	156
€1,500,001 to €2,000,000	63
€2,000,001 to €2,500,000	40
€2,500,001 to €3,000,000	19
€3,000,001 to €3,500,000	18
€3,500,001 to €4,000,000	14
€4,000,001 to €4,500,000	6
€4,500,001 to €5,000,000	4
Over €5,000,000	13

[18] All outstanding deferred awards are subject to malus and clawback provisions as set out in the most recent EMEA Remuneration Policy Disclosure

[19] The value of RSUs fluctuates with the value of the Firm's stock; the value of Deferred Cash awards fluctuates with the applicable interest rate.

7. Leverage (Article 451)

Managing Leverage Risk

Leverage risk is monitored through the same processes and frameworks as capital adequacy and stress-testing. The latter is particularly important, as it is forward-looking: if the Company's leverage ratios remain sustainable under stressed conditions, the risk of forced de-leveraging will be low.

The capital adequacy framework is based around a regular cycle of point-in-time capital calculations and reporting, supplemented by forward-looking projections and stress-testing, with corrective action taken as and when required to maintain an appropriate level of capitalisation. Each part of the process is subject to rigorous control.

On an annual basis, the Company completes the ICAAP, which provides management with a view of the impact of severe and unexpected events on earnings, risk-weighted assets, capital and leverage. The Company's ICAAP integrates stress-testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Company's earnings, capital resources, risk-weighted assets and balance sheet. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the entities in scope. However, when defining a broad range of scenarios, realized events can always be worse. ICAAP results are reviewed by management and the relevant Board of Directors.

The information represented in the tables below constitutes the key applicable data elements for leverage identified in Title VII of the EBA Guidelines.

Leverage Ratio Commentary

- **JPMS plc**: The leverage ratio has decreased by 0.12% (6.63% as at 31st December 2017). The decrease in the leverage ratio is driven by an increase in the leverage exposure value impacting the denominator of the ratio primarily due to increased business activity on SFTs driven by Fixed Income Financing. The decrease in the ratio was partially offset by an increase in T1 capital due to recognized audited profits impacting the numerator of the ratio.

- **JPMML**: No significant changes in the leverage ratio during 2018.

Table 35: Summary Reconciliation of Accounting Assets and Leverage Ratio Exposures

		JPMS plc	JPMML
		Applicable Amount ($'mm)	
1	Total assets as per published financial statements	668,042	4,355
4	Adjustments for derivative financial instruments	(60,911)	1
5	Adjustment for securities financing transactions (SFTs)	52,317	—
6	Adjustment for off-balance sheet items (ie conversion to credit equivalent amounts of off-balance sheet exposures)	11,338	—
7	Other adjustments	(1,321)	(4)
8	**Leverage ratio total exposure measure**	669,465	4,352

Table 36: Split of On-Balance Sheet Exposures

		JPMS plc	JPMML
		CRR leverage ratio exposures ($'mm)	
EU-1	Total on-balance sheet exposures (exc. Derivatives, SFTs and exempted exposures), of which:	224,251	265
EU-2	Trading book exposures	173,792	89
EU-3	Banking book exposures, of which:	50,459	176
EU-5	Exposures treated as sovereigns	30,351	—
EU-6	Exposures to regional governments, MDB, international organisations and PSEs not treated as sovereigns	36	—
EU-7	Institutions	10,614	113
EU-10	Corporate	5,577	6
EU-11	Exposures in default	161	—
EU-12	Other exposures (e.g. equity, securitisations and other non-credit obligation assets)	3,720	57

Table 37: Leverage Ratio Common Disclosure

		JPMS plc	JPMML
		CRR leverage ratio exposures ($'mm)	
On-balance sheet exposures (excluding derivatives and SFTs)			
1	On-balance sheet items (excluding derivatives, SFTs and fiduciary assets, but including collateral)	224,251	265
2	(Asset amounts deducted in determining Tier 1 capital)	(1,321)	(4)
3	**Total on-balance sheet exposures (excluding derivatives, SFTs and fiduciary assets) (sum of lines 1 and 2)**	222,930	261
Derivative exposures			
4	Replacement cost associated with all derivatives transactions (ie net of eligible cash variation margin)	42,785	2
5	Add-on amounts for PFE associated with all derivatives transactions (mark-to-market method)	193,487	2
7	(Deductions of receivables assets for cash variation margin provided in derivatives transactions)	(43,223)	—
8	(Exempted CCP leg of client-cleared trade exposures)	(13,314)	—
9	Adjusted effective notional amount of written credit derivatives	605,068	—
10	(Adjusted effective notional offsets and add-on deductions for written credit derivatives)	(605,068)	—
11	**Total derivative exposures (sum of lines 4 to 10)**	179,735	4
SFT exposures			
12	Gross SFT assets (with no recognition of netting), after adjusting for sales accounting transactions	477,900	4,087
13	(Netted amounts of cash payables and cash receivables of gross SFT assets)	(274,755)	—
14	Counterparty credit risk exposure for SFT assets	52,317	—
16	**Total securities financing transaction exposures (sum of lines 12 to 15a)**	255,462	4,087
Other off-balance sheet exposures			
17	Off-balance sheet exposures at gross notional amount	20,310	—
18	(Adjustments for conversion to credit equivalent amounts)	(8,972)	—
19	**Other off-balance sheet exposures (sum of lines 17 and 18)**	11,338	—
Capital and total exposure measure			
20	**Tier 1 capital**	43,583	4,137
21	**Leverage ratio total exposure measure (sum of lines 3, 11, 16, 19, EU-19a and EU-19b)**	669,465	4,352
Leverage ratio			
22	**Leverage ratio**	6.51%	95.05%
Choice on transitional arrangements and amount of derecognised fiduciary items			
EU-23	Choice on transitional arrangements for the definition of the capital measure	Fully phased in	Fully phased in

8. Use of Credit Risk Mitigation Techniques (Article 453)

As part of its management of credit and counterparty credit exposures, the Firm actively engages in credit risk mitigation techniques to reduce the amount of credit risk it is taking, to spread the concentration of risk across its portfolio and ultimately to ensure efficient use of capital in compliance with the applicable regulations. This is accomplished through a number of means, including loan sales, receipt of collateral, master netting agreements, guarantees and credit derivatives and other risk-reduction techniques.

As a result of such credit risk mitigation activities the firm is potentially exposed to residual risk to the extent that said techniques prove less effective than expected. In this regard, the firm has established policies and procedures to ensure that this risk is adequately governed and the mitigating technique conservatively measured, as detailed below.

Receipt of collateral and netting arrangements: Where possible, the Firm seeks to mitigate its credit risk exposures arising from derivative transactions through the use of legally enforceable master netting arrangements and collateral agreements.

The Firm also seeks to mitigate its credit risk exposures through the use of legally enforceable master netting arrangements These master agreements allow for netting of credit risk exposure to a counterparty resulting from transactions against the Group's obligations to the counterparty in the event of default, to produce lower net credit exposure. Similarly to CCF, Netting Confidence Factor ('NCF') is assigned to each jurisdiction/institution type where the Firm has obtained a legal opinion on the enforceability of the master trading agreement to close-out all governed transactions on a net basis in the event of a default (i.e. as a single legal claim). If the NCF is lower than 100%, no netting benefit is given.

Guarantees: The Third-Party Credit Supports policy sets out specific criteria for guarantees to be eligible for capital reduction, and to the extent they are not eligible the exposure retains its full value for the purposes of capital calculation. To ensure the legal enforceability of the commitment by the guarantor, all guarantees must be reviewed by legal counsel at the outset and are also subject to periodic review to ensure their ongoing effectiveness.

Credit Derivatives: The Firm uses credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses. The effectiveness of credit default swaps ('CDS') as a hedge against the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e. the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS); the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm); and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

Collateral Valuation and Management

The Firm's policies for collateral valuation and management are representative of industry standards and best practices. The fair value of the collateral is monitored daily. Full market value is not given to marketable assets accepted as collateral (apart from cash) in recognition of the fact that collateral is subject to price volatility and liquidity. A standard valuation reduction percentage (haircut) is applied to each asset class to mitigate the potential price decline of the collateral thereby covering volatility during the cure period. In addition, a Collateral Confidence Factor ('CCF') is assigned to each jurisdiction where the Firm has obtained a legal opinion on collateral enforceability. Any changes to CCFs require approval by Legal department. If the CCF is lower than 95% then, although J. P. Morgan would strictly have legal rights to collateral, conservatively no benefit is given to collateral in the exposure calculation for the purposes of capital requirements.

The Firm has internal policies in place relating to the type of acceptable collateral. These policies apply to the business which is booked in applicable UK legal entities. Cash and high quality bonds are generally considered acceptable collateral.

Main Types of Collateral

As at 31st December 2018, circa 62% of the collateral which JPMS plc held was in cash and 38% in securities of which 16% in government bonds from G6 countries. If restricting the collateral assets to posting from external counterparties to JPMS plc, circa 74% was in cash and 26% in securities of which 19% in government bonds from G6 countries.

Credit Risk Mitigation Effect for Credit Risk Exposures

The following tables illustrate the effect of credit risk mitigation techniques applied for credit risk exposures (i.e. on-balance sheet and off-balance sheet exposures) including RWA density as a synthetic metric on the riskiness of each exposure class portfolio.

Table 38: EU CR4 - Standardised approach - Credit risk exposure and CRM effects for JPMS plc

Exposure class ($'mm)		Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
		On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
1	Central governments or central banks	30,351	—	30,351	—	359	1.18%
3	Public sector entities	2	—	2	—	1	61.07%
4	Multilateral development banks	34	—	34	—	—	0.31%
6	Institutions	8,566	601	8,566	328	2,720	30.58%
7	Corporates	4,710	19,197	4,482	10,362	13,415	90.37%
10	Exposures in default	160	—	160	—	160	100.00%
11	Higher-risk categories	690	220	690	50	1,110	150.00%
15	Equity	2,125	—	2,125	—	5,181	243.83%
16	Other items	905	—	906	—	906	100.00%
17	**Total**	47,543	20,018	47,316	10,740	23,852	41.08%

Table 39: EU CR4 - Standardised approach - Credit risk exposure and CRM effects for JPMML

Exposure class ($'mm)		Exposures before CCF and CRM		Exposures post CCF and CRM		RWAs and RWA density	
		On-balance-sheet amount	Off-balance-sheet amount	On-balance-sheet amount	Off-balance-sheet amount	RWAs	RWA density
6	Institutions	111	—	111	—	49	44.97%
7	Corporates	63	—	63	—	63	100.00%
15	Equity	14	—	14	—	14	100.00%
16	Other items	44	—	44	—	44	100.00%
17	**Total**	232	—	232	—	170	74.50%

Credit Risk Mitigation Techniques

To reduce capital requirements exposures can be secured by collateral, financial guarantees or credit derivatives. JPMS plc and JPMML secure their exposure only by collateral as it is shown in the tables below.

Table 40: CRM techniques - Overview by exposure class for JPMS plc

Exposure class ($'mm)		Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Central governments or central banks	49,676	14,854	14,854	—	—
2	Regional government or local authorities	345	—	—	—	—
3	Public sector entities	1,748	691	691	—	—
4	Multilateral development banks	1,028	20	20	—	—
5	International organisations	77	6	6	—	—
6	Institutions	150,611	6,624	6,624	—	—
7	Corporates	71,297	9,024	9,024	—	—
10	Exposures in default	160	—	—	—	—
11	Higher-risk categories	19,813	4,652	4,652	—	—
15	Equity	2,125	—	—	—	—
16	Other items	905	—	—	—	—
17	**Total**	297,785	35,871	35,871	—	—

Table 41: CRM techniques - Overview by exposure class for JPMML

	Exposure class ($'mm)	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
6	Institutions	181	—	—	—	—
7	Corporates	65	1	1	—	—
15	Equity	14	—	—	—	—
16	Other items	44	—	—	—	—
17	**Total**	304	1	1	—	—

Table 42: EU CR3 - CRM techniques - Overview for JPMS plc

	Exposure class ($'mm)	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans	8,280	112	112	—	—
2	Total debt securities	22	—	—	—	—
3	**Total exposures**	8,302	112	112	—	—
4	Of which defaulted	160	—	—	—	—

Table 43: EU CR3 - CRM techniques - Overview for JPMML

	Exposure class ($'mm)	Exposures unsecured – Carrying amount	Exposures secured – Carrying amount	Exposures secured by collateral	Exposures secured by financial guarantees	Exposures secured by credit derivatives
1	Total loans	63	—	—	—	—
2	Total debt securities	—	—	—	—	—
3	**Total exposures**	63	—	—	—	—
4	Of which defaulted	—	—	—	—	—

Exposures Covered by Credit Derivatives and Guarantees

JPMS plc has a significant volume of credit derivatives in its trading portfolio. These are held for trading intent and are treated under the market risk framework rather than as credit risk mitigation.

Balance Sheet Netting

The financial statements are prepared under FRS 101 which applies the recognition and measurement requirements of International Financial Reporting Standards (‘IFRS’) as adopted by the European Union, with reduced disclosures. Under IFRS financial assets and financial liabilities are offset and the net amount reported in the balance sheet when the requirements of IAS 32 ‘Financial Instruments: Presentation’ are met; (i) there is currently a legally enforceable right to offset the recognised amounts and (ii) there is an intention to settle on a net basis or to realise the asset and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Company or the counterparty.

Credit Risk Netting

In most jurisdictions in which the Firms operate, credit risk exposures can be mitigated by applying netting. The Firms’ normal practice is to enter into standard master agreements with counterparties (e.g. International Swaps and Derivatives Association, Global Master Repurchase Agreement, Global Master Stock Lending Agreement). These master agreements allow for netting of credit risk exposure to a counterparty resulting from transactions against the Group’s obligations to the counterparty in the event of default, to produce lower net credit exposure. These agreements may also reduce settlement exposure (e.g. for foreign exchange transactions) by allowing for payments on the same day in the same currency to be set-off against one another. The Companies apply the requirements as set out in the CRR with regards to application of netting from a regulatory capital perspective.

9. Liquidity (Article 435 (1))

The Liquidity Coverage Ratio[20], as per the Commission Delegated Regulation (EU) 2015/61,requires credit institutions to maintain an amount of unencumbered high quality liquid assets that is sufficient to meet their estimated total net cash outflows over a prospective 30 calendar-day period of significant stress. From 1st January 2018 the LCR is required to be a minimum of 100%.

Key Ratios and Figures

The LCR disclosure in this document has been assessed in accordance with the EBA Final guidelines on LCR disclosure (EBA/GL/ 2017/01) applying the necessary considerations set out in the EBA guidelines on materiality, proprietary and confidentiality and on disclosure frequency under articles 432(1), 432(2) and 433 of Regulation (EU) No 575/2013 and consistent with the EBA guidelines on disclosure requirements under Part Eight of Regulation (EU) 575/2013 (EBA/GL/2016/11).

Table 44: Items prone to rapid change as defined in EBA GL/2017/01 for JPMS plc

	JPMS plc			
Currency and units	($'mm)	($'mm)	($'mm)	($'mm)
Quarter ending on	31-Dec-18	30-Sep-18	30-Jun-18	31-Mar-18
Number of data points used in the calculation of averages	12	12	12	12
	Total weighted adjusted value (average)			
LIQUIDITY BUFFER	**57,880**	**59,331**	**62,539**	**66,738**
TOTAL NET CASH OUTFLOWS	**22,847**	**25,046**	**28,716**	**31,849**
LIQUIDITY COVERAGE RATIO (%)	**259%**	**244%**	**227%**	**216%**

The weighted adjusted value of the liquidity buffer is the value of the total high quality liquid assets after the application of both haircuts and any applicable cap. The weighted adjusted value of net cash outflows is calculated after the inflows and outflows rates are applied and after any applicable cap on inflows. The liquidity buffer disclosed covers both Pillar I and Pillar II liquidity risks.

JPMML is an IFPRU investment firm and in 2015 the FCA granted JPMML an exemption from compliance with the obligations in Part Six of Regulation (EU) No 575/2013, on an individual basis. Consequently JPMML is exempted from LCR disclosure set out in the EBA guidelines (EBA/GL/2017/01), which apply to credit institutions that have to comply with the Guidelines on disclosure requirements (EBA/GL/2016/11) under Part Eight of Regulation (EU) No 575/2013 and which are covered by Commission Delegated Regulation (EU) 2015/61.

[20]In line with the EBA guidelines the average ratio disclosed in Table 44 is calculated as an average over the 12 data points used for each item, and therefore the quoted ratio is not equal to the average 'Liquidity buffer' divided by average 'Total net cash outflows'.

10. Bank Recovery and Resolution Directive

Article 26 of the Bank Recovery and Resolution Directive (‘BRRD’) states that member States shall ensure that group entities make public whether or not they have entered into a group financial support agreement pursuant to Article 19 of the BRRD and make public a description of the general terms of any such agreement and the names of the group entities that are party to it and update that information at least annually. Articles 431 to 434 of Regulation (EU) No 575/2013 shall apply.

Pursuant to the disclosure requirements under the PRA’s Group Financial Support Instrument 2015, the BRRD undertakings on which the disclosure obligation is imposed, have not entered into any group financial support agreement.

Pursuant to the disclosure requirements under the FCA handbook section IFPRU 11.5, no firm or qualifying parent undertaking on which the disclosure obligation is imposed, has entered into any group financial support agreement.

11. Glossary of Acronyms

APAC	Asia Pacific
AT1	Additional Tier 1
BIA	Basic Indicator Approach
BOE	Bank of England
BRRD	Bank Recovery and Resolution Directive
CCF	Collateral Confidence Factor
CCP	Central Counterparty Clearing House
CCR	Counterparty Credit Risk
CDS	Credit Default Swaps
CET1	Common Equity Tier 1
CIB	Corporate and Investment Bank
CIU	Collective Investments Undertakings
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CVA	Credit Valuation Adjustment
EAD	Exposure at default
EBA	European Banking Authority
ECL	Expected Credit Losses
EMEA	Europe, Middle East and Africa
FCA	Financial Conduct Authority
FRS	Financial Reporting Standard
FSB	The Financial Stability Board
FVOCI	Fair value through other comprehensive income
IAS	International Accounting Standards
ICG	Individual Capital Guidance
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standards
IMA	Internal Models Approach
IMM	Internal Model Method
ITS	Implementing Technical Standards
JPMCHL	J.P. Morgan Capital Holdings Limited
JPMFIL	J.P. Morgan Financial Investments Limited
JPMML	J.P.Morgan Markets Limited
JPMS plc	J.P. Morgan Securities PLC
LCR	Liquidity Coverage Ratio
LGD	Loss given default
LOB	Line of Business
MREL	Minimum Requirement for own funds and Eligible Liabilities
MtM	Mark to Market Method
NCF	Netting Confidence Factor
OTC	Over the Counter
PD	Probability of Default
PFE	Potential Future Exposure
PRA	Prudential Regulation Authority
RSU	Restricted Stock Units
RWA	Risk Weighted Assets
SFT	Securities Financing Transactions
SICR	Significant increase in credit risk
TLAC	Total Loss Absorbing Capacity
UK RemCo	UK Remuneration Committee
VaR	Value-at-Risk